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EXAMINER	
YUEN, KAN	

ART UNIT	PAPER NUMBER
2416	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/654,161	LIU ET AL.	
	Examiner	Art Unit	
	KAN YUEN	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 June 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-14 and 16-42* is/are allowed.

6)☒ Claim(s) *15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Detailed Action

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after the Final Action. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/24/2009 has been entered.

Response to Arguments

1. Applicant's arguments with respect to claims 1-42 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 19 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benson et al. (Pat No.: 7072295) in view of Sreejith et al. (Pub No.: 2003/0035432).

For claim 1, Benson et al. disclosed a method for hierarchical scheduling of prioritized messages comprising:

at a first level, placing messages of a traffic type based on a specified criteria for the traffic type onto a message queue (fig. 1, four individual traffic flows (VLs) or message queues) for the traffic type (column 5, lines 25-67, column 6, lines 1-30, column 10, lines 40-67). Each VL has a guaranteed rate, measure in cell slots per frame, to support delay and cell loss bounds for its constituent flows. The explicit rate assignment process keeps two queue size states per VL: a committed traffic queue state (CBR), (VBR) and (UBR). CBR, VBR, UBR are the traffic types; wherein there are multiple traffic types and multiple message queues for the multiple traffic type located within one of a plurality of traffic queues (column 5, lines 25-67, column 6, lines 13-30, column 10, lines 40-67). Since each VL has a guaranteed rate, thus there are many traffic rates. Every two input flows (VLs) associating with a VL scheduler shown in fig. 1 is considered as one traffic queue;

selecting (Benson et al. fig. 1, input flow, VL scheduler) from the multiple message queues within each of the plurality of traffic queues a first message (column 5, lines 25-67, fig. 1 VL scheduler). The VL scheduler chooses among plurality of VLs;

selecting (fig. 1, Link scheduler) from the first messages plurality of traffic queues a message based on a priority assigned to each traffic type (column 5, lines 25-67, fig. 1 Link scheduler). The input schedulers distribute the granted cell slots to individual flows according to their QoS requirements. The link scheduler choosing among VLs and N VL scheduler, choosing among flows in a VL;

providing the selected message to an interface (fig. 1, fabric scheduler); at a second level, reading the selected message from the interface;

placing the read message into one of a plurality of priority queues, each of the priority queues having only messages of a similar priority level (fig. 1, fabric flow between input 10 and output 11). The fabric queues between input 10 and output 11 links are considered as the priority queues. Since the fabric schedulers can be simple FIFO or priority scheduler, therefore the fabric queues are considered as priority queues. The fabric queues can be broadly interpreted to be the priority queues which stores messages with similar priority levels; and

selecting (fig. 1, Fabric scheduler) a second message from one of the plurality of priority queues for transmission when a transmit opportunity is available (column 5, lines 25-67). The fabric scheduler can be a simple FIFO or priority scheduler;

However, Benson et al. did not explicitly disclose the feature wherein each of the priority queues having only messages of a single priority level. Sreejith et al. from the same or similar fields of endeavor disclosed the feature wherein each of the priority queues having only messages of a single priority level (Sreejith et al. see paragraph 0015, fig. 1). Fig. 1A depicts a switch fabric 100 includes a number of sets of input

queues 103-103n, wherein each set of input queues includes a queue for each (single) possible priority.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the switch fabric 100 as taught by Sreejith et al. in the network of Benson et al. The motivation for using the feature as taught by Sreejith et al. in the network of Benson et al. being that it increases transmission reliability by providing additional path selection criteria.

Regarding claim 19, Benson et al. disclosed the hierarchical scheduling system comprising:

a plurality of traffic queues, each traffic queue containing a plurality of message queues and a queue scheduler (Benson et al. fig. 1, input flow, VL scheduler). As shown in fig. 1, there are four individual traffic flows or message queues, wherein every two flows (traffic queue) are associated with a VL scheduler or queue scheduler, wherein each traffic queue enqueues messages of a single traffic type, wherein each message queue is used to store messages from a single message flow (column 5, lines 25-67). Flows originating from the same input and destined to the same output are assigned to one group referred to as a virtual link (VL), and thus the flows from the same input are considered as a single traffic type; and

the queue scheduler orders the messages in the message queues according to a first scheduling algorithm (column 5, lines 25-67). The input schedulers distribute the granted cell slots to individual flows according to their QoS requirements;

a first scheduler **(fig. 1, Link scheduler)** coupled to each traffic queue, the first priority scheduler containing circuitry to select a message from one of the traffic queues based upon a first serving algorithm (column 5, lines 25-67, column 11, lines 15-20). A round robin link scheduler may be employed with priority of committed traffic over uncommitted traffic;

a plurality of priority queues coupled to the first scheduler (fig. 1, fabric flow between input 10 and output 11). The fabric queues between input 10 and output 11 links are considered as the priority queues. Since the fabric schedulers can be simple FIFO or priority scheduler, therefore the fabric queues are considered as priority queues; wherein each priority queue is used to store messages selected by the first scheduler according to a message's assigned priority level (column 5, lines 25-67). The first scheduler distritube the granted cell slots to individual flows according to their QoS requirements or priority level;

a second scheduler (fig. 1, Fabric scheduler) coupled to priority queue, the second scheduler containing circuitry to select a message from one of the priority queues according to a second serving algorithm (column 5, lines 25-67). The fabric scheduler can be a simple FIFO or priority scheduler.

However, Benson et al. did not explicitly disclose the feature wherein the second scheduler coupled to the plurality of priority queues.

Sreejith et al. from the same or similar fields of endeavor disclosed the feature wherein the second scheduler (Sreejith et al. fig. 1, Scheduler 104a-104n) coupled to the plurality of priority queues (Sreejith et al. see paragraph 0015, fig. 1). Fig. 1A depicts

a switch fabric 100 includes a number of sets of input queues 103a-103n, wherein each set of input queues includes a queue for each possible priority. Each set of queues e.g., 103a is coupled to its corresponding Scheduler e.g., 104a. Thus, the Scheduler 104a is coupled to its corresponding set of queue (103a), wherein the queue 103a comprises a plurality of small priority queues.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the switch fabric 100 as taught by Sreejith et al. in the network of Benson et al. The motivation for using the feature as taught by Sreejith et al. in the network of Benson et al. being that it increases transmission reliability by providing additional path selection criteria.

Regarding claim 35, Benson et al. disclosed a communications device comprising:

a host (fig 1. input scheduler) to process information, the host comprising a plurality of traffic queues, each traffic queue containing a plurality of message queues and a queue scheduler (Benson et al. fig. 1, input flow, VL scheduler). As shown in fig. 1, there are four individual traffic flows or message queues, wherein every two flows (traffic queue) are associated with a VL scheduler or queue scheduler, wherein each traffic queue enqueues messages of a single traffic type, wherein each message queue is used to store messages from a single message flow (column 5, lines 25-67). Flows originating from the same input and destined to the same output are assigned to one group referred to as a virtual link (VL), and thus the flows from the same input are considered as a single traffic type; and

the queue scheduler orders the messages in the message queues according to a first scheduling algorithm (column 5, lines 25-67). The input schedulers distribute the granted cell slots to individual flows according to their QoS requirements;

a first scheduler (fig. 1, Link scheduler) coupled to each traffic queue, the first priority scheduler containing circuitry to select a message from one of the traffic queues based upon a first serving algorithm (column 5, lines 25-67, column 11, lines 15-20). A round robin link scheduler may be employed with priority of committed traffic over uncommitted traffic;

a station (fig. 1, switch fabric) coupled to the host, the station to permit communications between the host and other devices, the station comprising a plurality of priority queues coupled to the first scheduler (fig. 1, fabric flow between input 10 and output 11). The fabric queues between input 10 and output 11 links are considered as the priority queues. Since the fabric schedulers can be simple FIFO or priority scheduler, therefore the fabric queues are considered as priority queues;

wherein each priority queue is used to store messages selected by the first scheduler according to a message's assigned priority level (column 5, lines 25-67). The first scheduler distritube the granted cell slots to individual flows according to their QoS requirements or priority level;

a second scheduler (fig. 1, Fabric scheduler) coupled to priority queue, the second scheduler containing circuitry to select a message from one of the priority queues according to a second serving algorithm (column 5, lines 25-67). The fabric scheduler can be a simple FIFO or priority scheduler.

However, Benson et al. did not explicitly disclose the feature wherein the second scheduler coupled to the plurality of priority queues.

Sreejith et al. from the same or similar fields of endeavor disclosed the feature wherein the second scheduler (Sreejith et al. fig. 1, Scheduler 104a-104n) coupled to the plurality of priority queues (Sreejith et al. see paragraph 0015, fig. 1). Fig. 1A depicts a switch fabric 100 includes a number of sets of input queues 103a-103n, wherein each set of input queues includes a queue for each possible priority. Each set of queues e.g., 103a is coupled to its corresponding Scheduler e.g., 104a. Thus, the Scheduler 104a is coupled to its corresponding set of queue (103a), wherein the queue 103a comprises a plurality of small priority queues.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the switch fabric 100 as taught by Sreejith et al. in the network of Benson et al. The motivation for using the feature as taught by Sreejith et al. in the network of Benson et al. being that it increases transmission reliability by providing additional path selection criteria.

5. Claims 2, 4-8, 11-14, 16-18, 21-27, 29-34, 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benson et al. (Pat No.: 7072295), in view of Sreejith et al. (Pub No.: 2003/0035432) as applied to claim 1 above, and further in view of Minshall (Pat No.: 698774).

For claim 2, Benson et al. and Sreejith et al. did not disclose for each traffic type, there are multiple message streams, and wherein messages from different message streams of each traffic type are placed in the message queue for that traffic type. Minshall from the same or similar fields of endeavor teaches wherein for each traffic type, there are multiple message streams, and wherein messages from different message streams of each traffic type are placed in the message queue for that traffic type. (Minshall see fig. 2, and see column 3, lines 5-25). As shown in the drawing, each queue represents different class of data, which can be arranged from high to low priority.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the teaching of Minshall in the network of Benson et al. and Sreejith et al. The motivation for using the teaching as taught by Minshall in the network of Benson et al. and Sreejith et al. being that it provides many traffic types in an automated network.

Regarding claim 4, Minshall disclosed the feature wherein for each traffic type messages from the different message streams for that traffic typeare placed in the message queue for that traffic type based on a weighing of the different message streams for that traffic type (Minshall see fig. 5, and see column 3, lines 5-25). As shown in the drawing, each queue represents different class of data, which can be arranged from high to low priority (weighting).

Regarding claim 5, Minshall disclosed the feature wherein the message selected in the first selecting is the message at a head of a message queue for a traffic

type with the highest priority (Minshall see fig. 5, and see column 3, lines 5-25), wherein the reference, the highest priority group is selected.

Regarding claim 6, Minshall disclosed the feature wherein the message selected in the second selecting is the message at a head of a message queue for a traffic type with the highest priority that has a granted transmission opportunity (Minshall see fig. 2, and see column 2, lines 4-20), wherein the reference, the highest priority group is selected by the second level scheduler 203.

Regarding claim 7, Minshall disclosed the feature wherein the interface is a shared memory, and wherein the providing comprises writing the selected message to the shared memory (Minshall see fig. 2, and see column 3, lines 65-67, and see column 4, lines 1-25). The queuing groups 202, 204, and 206 are forwarded to the interfaces 205, 207, and 209. A packet scheduler combines features of priority-based scheduler and generalized processor sharing schedulers. Therefore, the scheduler 203 write a message from shared schedulers 205, 207 and 209.

Regarding claim 8, Minshall disclosed the feature wherein the reading comprises retrieving the selected message from the shared memory (Minshall see fig. 2, and see column 3, lines 65-67, and see column 4, lines 1-25). The queuing groups 202, 204, and 206 are forwarded to the interfaces 205, 207, and 209. A packet scheduler combines features of priority-based scheduler and generalized processor sharing schedulers. Therefore, the scheduler 203 selects a message from shared schedulers 205, 207 and 209.

Regarding claim 11, Minshall disclosed the feature wherein the transmit opportunity has multiple periods, and wherein in a first period, only the highest priority messages can be transmitted (Minshall see column 3, lines 54-65). As shown, the queue with greater value has the priority to transmit first, as well as with clock value less than others. Therefore, examiner interpreted that it transmits first.

Regarding claim 12, Minshall disclosed the feature wherein in a second period, any priority message can be transmitted (Minshall see column 3, lines 54-65). The next (second) higher clock value queue is transmitted. The system also takes priority of lower value queue to be transmitted first. Therefore, the next (second) higher clock value queue can be any priority queue being transmitted.

Regarding claim 13, Minshall disclosed the feature wherein a message of a given priority can be selected only if there are no messages of a higher priority waiting to be transmitted (Minshall see column 3, lines 5-25). A next queue is selected if the higher priority queue does not have data to transmit.

Regarding claim 14, Minshall disclosed the feature wherein a message of a given priority can be selected only if there are no transmission opportunities for messages of a higher priority (Minshall see column 3, lines 5-25). A next queue is selected if the higher priority queue does not have data to transmit. Therefore we can interpret that no data is same as no transmission opportunities.

Regarding claim 16, Minshall disclosed the feature wherein the placing comprises putting the message into a priority queue assigned to enqueue messages of the same assigned priority (Minshall see fig. 2, and see column 2, lines 4-20). As

shown, a set of traffics is stored into different group of queues. Each queue has different type of data.

Regarding claim 17, Minshall disclosed the feature wherein the second selecting comprises choosing a message with an assigned priority level equal to that permitted in the transmission opportunity (Minshall see fig. 2, and see column 2, lines 4-20). At second selecting, the scheduler 203 selects the highest priority queue.

Regarding claim 18, Minshall disclosed the feature wherein the second selecting further comprises choosing a message with a transmit time shorter than the transmission opportunity. (Minshall see fig. 2, and see column 2, lines 4-20, and see column 3, lines 50-67). At second selecting, the scheduler 203 selects the highest priority queue, with less clock value.

Regarding claim 21, Minshall disclosed the feature wherein the first scheduling algorithm also enqueues messages based on a weighting value assigned to each message flow (Minshall see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 selects a queue from each of the group queues 202, 204 and 206 based on priority value (weighting value).

Regarding claim 22, Minshall disclosed the feature wherein the first serving algorithm selects the message based upon a priority level assigned to each traffic queue (Minshall see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 selects a queue from each of the group queues 202, 204 and 206 based on priority value (priority level).

Regarding claim 23, Minshall disclosed the feature wherein the first serving algorithm selects the message based upon information regarding remaining bandwidth allocated for each traffic type (Minshall see column 3, lines 65-67, and see column 4, lines 1-10). The scheduler also guarantees bandwidth traffic, which we can interpret that scheduler selects based on bandwidth or remaining bandwidth.

Regarding claim 24, Minshall disclosed the feature wherein information about the selected message is used to adjust the information about the remaining bandwidth allocation (Minshall see column 3, lines 65-67, and see column 4, lines 1-10). Once the highest priority queue is selected, the next queue with selected based on the previous bandwidth allocation.

Regarding claim 25, Minshall disclosed an interface between the first scheduler and the plurality of priority of queues, the interface to allow the exchange of information between the first scheduler and the plurality of priority queues (Minshall see fig. 2, and see column 2, lines 4-20 and see column 4, lines 1-10). As shown, the first scheduler shares or exchanges information with the priority queues 205, 207, and 209.

Regarding claim 26, Minshall disclosed the feature wherein the interface is a shared memory (Minshall see fig. 2, and see column 3, lines 65-67, and see column 4, lines 1-25). The queuing groups 202, 204, and 206 are forwarded to the interfaces 205, 207, and 209. A packet scheduler combines features of priority-based scheduler and generalized processor sharing schedulers. Therefore, the scheduler 203 write a message from shared schedulers 205, 207 and 209.

Regarding claim 27, Minshall disclosed the feature wherein a priority queue can enqueue message from different message flows with equal assigned priority levels (Minshall see column 3, lines 50-67). The scheduler selects the priority group based on the priority values.

Regarding claim 29, Minshall disclosed the feature wherein the second serving algorithm selects the message based upon an assigned priority level (Minshall see fig. 5, and see column 3, lines 5-25). As shown in the drawing, each queue represents different class of data, which can be arranged from high to low priority (priority level).

Regarding claim 30, Minshall disclosed the feature wherein the second serving algorithm selects the message based upon information about which message priority can be transmitted (Minshall see fig. 5, and see column 3, lines 5-25). As shown in the drawing, each queue represents different class of data, which can be arranged from high to low priority (priority level).

Regarding claim 31, Minshall disclosed the feature wherein the second serving algorithm selects the message if there is sufficient time to transmit the message (Minshall see column 3, lines 50-67). The scheduler selects queuing groups based on the clock value.

Regarding claim 32, Minshall disclosed the feature wherein information about the selected message is used to adjust the information about remaining time to transmit messages (Minshall see column 3, lines 65-67, and see column 4, lines 1-10). Once the highest priority queue is selected, the next queue with selected based on the previous bandwidth allocation.

Regarding claim 33, Minshall disclosed the feature wherein information about the selected message is used to adjust the information about the message priority that can be transmitted (Minshall see column 3, lines 65-67, and see column 4, lines 1-10). Once the highest priority queue is selected, the next queue with selected based on the previous bandwidth allocation.

Regarding claim 34, Minshall disclosed the feature wherein messages selected by the second scheduler are provided to a transmitter to transmit to the messages' intended destination (Minshall see fig. 1 and 2, and see column 2, lines 4-20). As shown, a set of traffics is stored into different group of queues. Each queue has different type of data. After the selection of priority group for transmission, the groups are being transmission by using link107 in fig. 1 to its destination.

Regarding claim 36, Minshall disclosed an interface between the host and the station, the interface to permit an exchange of messages (Minshall see fig. 2, and see column 2, lines 4-20 and see column 4, lines 1-10). As shown, the first scheduler shares or exchanges information with the priority queues 205, 207, and 209.

Regarding claim 37, Minshall disclosed the feature wherein the interface is a shared memory (Minshall see fig. 2, and see column 3, lines 65-67, and see column 4, lines 1-25). The queuing groups 202, 204, and 206 are forwarded to the interfaces 205, 207, and 209. A packet scheduler combines features of priority-based scheduler and generalized processor sharing schedulers. Therefore, the scheduler 203 write a message from shared schedulers 205, 207 and 209.

Regarding claim 38, Minshall disclosed the feature wherein the plurality of traffic queues is implemented in a memory in the host and the first scheduler is executing in processor in the host (Minshall see fig. 2, and see column 3, lines 65-67, and see column 4, lines 1-25). The queuing groups 202, 204, and 206 are forwarded to the interfaces 205, 207, and 209. A packet scheduler combines features of priority-based scheduler and generalized processor sharing schedulers. Therefore, the scheduler 203 write a message from shared schedulers 205, 207 and 209.

Regarding claim 39, Minshall disclosed the feature wherein the plurality of priority queues is implemented in a firmware of the station and the second scheduler is executing in the firmware of the station (Minshall see fig. 2, and see column 3, lines 65-67, and see column 4, lines 1-25). As shown, the line card can be implemented with a software functions as described in the reference.

6. Claims 3, 20 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benson et al. (Pat No.: 7072295), In view of Sreejith et al. (Pub No.: 2003/0035432) and Minshall (Pat No.: 698774), as applied to claim 2 or 19 above, and further in view of Gemar (Pat No.: 6414963).

For claims 3, 20 and 28 Benson et al. Sreejith et al. and Minshall did not disclose the feature wherein for each traffic type, messages from the different message streams for that traffic type are placed in the message queue for that traffic type in a first-come first-served (FIFO) order. Gemar from the same or similar fields of endeavor

teaches the method of the first scheduling algorithm enqueues messages based on their arrival time (see column 2, lines 59-67) and (Gemar see column 2, lines 59-67). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught by Gemar in the network of Benson et al. Sreejith et al. and Minshall. The motivation for using the feature as taught by Gemar in the network of Benson et al. Sreejith et al. and Minshall, being that it provides data selection based on in earliest arrived arrangement.

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benson et al. (Pat No.: 7072295), In view of Sreejith et al. (Pub No.: 2003/0035432) as applied to claim 1 above, and further in view of Kramer et al. (Pat No.: 7116680).

For claim 9, Benson et al. and Sreejith et al. both did not disclose the feature wherein the interface is a shared memory, and wherein the providing comprises writing a reference pointer to the selected message to the shared memory. Kramer et al. from the same or similar fields of endeavor teaches the method of the interface is a shared memory, and wherein the providing comprises writing a reference pointer to the selected message to the shared memory (Kramer et al. see column 2, lines 46-56). As shown, the data is classified as reference in the memory.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught by Kramer et al. in the network of Benson et al. and Sreejith et al. The motivation for using the feature as taught by

Kramer et al. in the network of Benson et al. and Sreejith et al. being that it provides a convenient way to identify data with header or marker corresponding to its identities.

Regarding claim 10, Kramer et al. disclosed the feature wherein the reading comprises retrieving the reference pointer and retrieving the selected message stored at a memory location indicated by the reference pointer (Kramer et al. see column 2, lines 46-56). As shown, the data is classified as reference in the memory.

8. Claims 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benson et al. (Pat No.: 7072295), In view of Sreejith et al. (Pub No.: 2003/0035432) as applied to claim 35 above, and further in view of Del Prado Pavon et al. (Pub No.: 2004/0047351).

For claim 40, Benson et al. and Sreejith et al. did not disclose wherein the station is a wireless network adapter. Del prado pavon et al. from the same or similar fields of endeavor teaches the station is a wireless network adapter (Del prado pavon et al. see paragraph 0046, lines 1-12, see paragraph 0048, lines 1-10). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the teaching as taught by Del Prado Pavon et al. in the network of Benson et al. The motivation for using the teaching as taught by Del Prado Pavon et al. in the network of Benson et al. and Sreejith et al. being that the scheduling can be performing in a hybrid mode (wired and wireless environment).

Regarding to claim 41, Del Prado Pavon et al. also disclosed the method of the wireless network adapter is IEEE 802.11e compliant (see paragraph 0046, lines 1-12, see paragraph 0048, lines 1-10).

Regarding to claim 42, Del Prado Pavon et al. also disclosed the method of the station is a wired network adapter (see paragraph 0046, lines 1-12, see paragraph 0048, lines 1-10). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the teaching as taught by Del Prado Pavon et al. in the network of Benson et al. The motivation for using the teaching as taught by Del Prado Pavon et al. in the network of Benson et al. being that the scheduling can be performing in a hybrid mode (wired and wireless environment).

Allowable Subject Matter

9. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Examiner's Note:

Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within

the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAN YUEN whose telephone number is (571)270-1413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kan Yuen/
Examiner, Art Unit 2416

/Ricky Ngo/
Supervisory Patent Examiner, Art Unit 2416

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